

by Von Baer. Farther, that the origin of the "laminae dorsales" of this naturalist (the "central nervous system" of Reichert) is not simultaneous with, but anterior to, that of the chorda.

The author then reviews the observations of Rathke and Reichert on the chorda dorsalis, which contain internal evidence, he thinks, of a process in the development of Fishes, Reptiles, and Birds, the same as that which he has observed in Mammalia; namely, the origin of the embryo out of the nucleus of a cell.

And it is his opinion that this observation may assist to solve a question on which physiologists are not agreed; for it shows, that if the nucleus of a cell is a single object, the first rudiments of the embryo are not two halves. The author thinks that unless the very earliest periods are investigated, it is in vain that we attempt to learn what that is, of which the rudiments of the embryo are composed. From not attending to this, physiologists have supposed their "primitive trace" to arise in the substance of a membrane, which the author, in his second series on the embryo, showed could not be the case. To the same cause he thinks is referable an opinion recently advanced by Reichert, that the first traces of the new being are derived from cells of the yolk.

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January 14, 1841.

Sir JOHN W. LUBBOCK, Bart., V.P. and Treas., in the Chair.]

Charles Enderby, Esq. and James Cosmo Melvill, Esq. were balloted for and duly elected into the Society.

A paper was read, entitled, "On the Corpuscles of the Blood." Part II. By Martin Barry, M.D., F.R.S.S. L. and E.

The observations recorded in this memoir are founded on an examination of the blood in every class of vertebrated animals, in some of the Invertebrata, and in the embryo of Mammalia and Birds. The nucleus of the blood-corpuscle, usually considered as a single object, is here represented as composed, in some instances, of two, three, or even many parts; these parts having a constant and determinate form. In the substance surrounding the nucleus, the author has frequently been able to discern, not merely "red colouring matter," but cell-like objects; and he points out an orifice as existing at certain periods in the delicate membrane by which this substance is surrounded. In a former memoir he had differed no less from previous observers regarding "cells." He had shown, for instance, that the nucleus of the cell, instead of being "cast off as useless, and absorbed," is a centre for the origin, not only of the transitory contents of its own cell, but also of the two or three principal and last-formed cells, destined to succeed that cell; and that a separation of the nucleus into two or three parts, is not, as Dr. Henle had supposed in the case of the Pus and Mucus-globule (the only instances

in which the separation in question had been observed), the effect of acetic acid, used in the examination,—but that such separation is natural, apparently common to nuclei in general, and forming part of the process by which cells are reproduced. The author had farther shown the so-called nucleolus to be not a distinct object existing before the nucleus, but merely one of a series of appearances arising in succession, the one within the other, at a certain part of the nucleus, and continuing to arise even after the formation of the cell. These views he now confirms; and in the present paper shows that they admit of being extended to the corpuscles of the blood.

He then compares appearances observed in the latter with those he had traced in the ovum. These relate to the number of parts of which the nucleus is at different periods composed,—the nature of the nucleolus,—the communication between the nucleolus and the exterior of the cell,—the formation of the contents of the cell out of the nucleus,—the final division of the nucleus into the foundations of a limited number of young cells, destined to succeed the parent cell,—and the escape of the young cells for this purpose. It follows from these investigations, that the corpuscles of the blood are generated by a process essentially the same as that giving origin to those cells which are the immediate successors of the germinal vesicle, or original parent cell; it being also by a continuation of the same process that the corpuscle of the blood divides itself into the minuter objects figured by the author in his former paper on the blood.

He adds, that in its form and internal state, the blood-corpuscle found in the adult of certain animals, very much resembles that existing only in the foetal life of others. It is incidentally remarked, that the foetal brain, at certain periods, appears to consist almost entirely of objects very much resembling those which, in some stages, form the nuclei in the foetal corpuscles of the blood.

The author concludes, by expressing his opinion, that the mode of evolution of the minute mammiferous ovum is deserving of close attention, in connexion with some of the processes by which nourishment is communicated, and the growth of the body effected, at all future periods of life.

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January 21, 1841.

Sir JOHN BARROW, Bart., V.P., in the Chair.

Peyton Blackiston, M.A. & M.D., Captain Henry Rowland Brandreth, R.E., and Joseph Edye, Esq., were balloted for and duly elected into the Society.

A paper was in part read, entitled, “On the action of certain Inorganic Compounds, when introduced directly into the Blood.” By J. Blake, Esq., M.R.C.S. Communicated by P. M. Roget, M.D., Sec. R.S.